

06- DEPARTMENT OF ENVIRONMENTAL PROTECTION

096 BUREAU OF AIR QUALITY CONTROL

CHAPTER 111: PETROLEUM LIQUID STORAGE VAPOR CONTROL

SUMMARY: This regulation requires all owners of fixed roof storage tanks, storing gasoline, crude oil or any petroleum liquid whose vapor pressure is greater than 1.52 psia (10.5 kilo pascals) to install floating roofs to reduce the hydrocarbon vapors lost to the atmosphere.

1. Scope

- A. This regulation shall be applicable in all ambient air quality regions of the State of Maine.
- B. This regulation shall apply to all fixed roof storage vessels with capacities greater than 150,000 liters (39,000 gallons) containing volatile petroleum liquids whose true vapor pressure is greater than 10.5 kilo pascals (1.52 psia) or a Reid vapor pressure of 4 psi. Such fixed roof storage vessels are subject to New Source Performance Standards as of the dates specified in and in accordance with the requirements contained in 40 CFR, Part 60, Subparts K, Ka, and Kb.
- C. Section 5(B) of this regulation shall apply to all fixed roof storage vessels with capacities greater than 150,000 liters (39,000 gallons) containing volatile petroleum liquids whose true vapor pressure is greater than 1.0 psia but less than 1.52 psia.

2. Prohibition

No owner or operator of a fixed roof storage vessel shall permit or suffer the use of such vessels unless:

- A. The vessels have been retrofitted with an internal floating roof equipped with a closure seal, or seals, to reduce the visual space between the roof edge and tank wall; or the vessels have been retrofitted with equally effective alternative control as approved by the Commissioner and the United States Environmental Protection Agency;
- B. The vessel is maintained such that there are no visible holes, tears, or other openings in the seal or any seal fabric or materials;

C. All openings except stub drains are equipped with covers, lids, or seals such that:

1. the cover, lid, or seal is in the closed position at all times except when in actual use; and
2. automatic bleeder vents are closed at all times except when the roof is being floated off or being landed on the roof leg supports;
3. rim vents, if provided, are set to open only when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting;

D. Routine inspections are conducted through roof hatches once every six (6) month; and

E. A complete inspection of cover and seal is performed at least once per year.

3. Emission Testing.

The determination of compliance under this section may be made by visual inspection of the floating cover through the roof hatches by Department staff or other qualified representatives of the Department. The source shall be found in compliance if:

- A. The seal has no visible holes, tears, or other openings and is uniformly in place around the circumference of the cover between the cover and tank well;
- B. The cover is uniformly floating on or above the liquid and there are no visible holes, tears, or other openings in the surface of the cover and no liquid is accumulated on the cover; and
- C. All records are being properly maintained.

4. Transition Schedule.

The owner or operator of fixed-roof petroleum storage vessels located in Air Quality Control Regions III, IV and V shall have until July 1, 1991, to comply with the requirements under subsection 2, paragraph A. In Air Quality Control Regions III, IV and V, the owner or operator of a fixed-roof petroleum storage vessel without a floating roof or other acceptable volatile organic compound emission control equipment shall adhere to the increments of progress contained in the following schedule and shall report to the department within 15 days of the

prescribed deadline the status of compliance with each increment of progress.

A. Final plans for the floating roof, other necessary modifications or other acceptable volatile organic compound emission control equipment shall be submitted before November 1, 1989.

B. Contracts for installation of the floating roof, other modifications or other acceptable volatile organic compound emission control equipment or purchase orders for component parts shall be issued before March 1, 1990.

C. Initiation of on-site construction or installation of acceptable volatile organic compound emission control equipment shall begin before July 1, 1990.

D. Final compliance shall be achieved before July 1, 1991.

5. Records

A. The owner or operator of a fixed roof storage vessel covered under the scope of this regulation shall assure the following records are maintained for a minimum of two years. These records shall be available for inspection during normal business hours and copies shall be provided to the Commissioner or his representative upon request:

1. Reports of the results of inspections conducted under paragraphs (2)(D) and (2)(E);
2. A record of the monthly throughput quantities and types of volatile petroleum liquids for each storage vessel and period of storage; and
3. Records of the average monthly storage temperatures and true vapor pressures of volatile petroleum liquids stored.

B. The owner or operator of a fixed roof storage vessel with capacity greater than 150,000 liters (39,000 gallons) containing volatile petroleum liquids whose true vapor pressure is greater than 1.0 psia but less than 1.52 psia. shall assure the following records are maintained for a minimum of two years. These records shall be available for inspection during normal business hours and copies shall be provided to the Commissioner or his representative upon request:

1. Records of the average monthly storage temperatures, the type of petroleum liquid, and maximum true vapor pressures of volatile petroleum liquids stored.

BASIS STATEMENT : Gasoline is a hydrocarbon vapor that aids the formation of ozone in the

atmosphere. It is necessary to control such hydrocarbon vapors present in the atmosphere because Maine is violating the federal ozone ambient air quality standard. This regulation controls the maximum amount of gasoline emissions so to reduce the ozone formed.

BASIS STATEMENT FOR AMENDMENT OF AUGUST 10, 1988 : This amendment expanded the scope of the regulation to include all ambient Air Quality Control Regions in the State. Uncontrolled gasoline storage terminals in the Downeast and Central Maine Ambient Air Quality Control Regions have been estimated as emitting over 800 tons of hydrocarbons annually. The use of floating roofs and vapor control systems (Chapter 111 and 112) for bulk gasoline terminals is considered Best Practical Treatment and will reduce emissions by about 94 percent.

BASIS STATEMENT FOR AMENDMENT OF SEPTEMBER 27, 1989 : This amendment corrected certain minor deficiencies identified by the U.S. Environmental Protection Agency in the State Implementation Plan and for consistency with State statute. The U.S. Environmental Protection Agency also commented on requiring facilities which store more than 39,000 gallons of petroleum products with a true vapor pressure greater than 1.0 psi to maintain records of the average monthly temperature and the maximum true vapor pressure. The Department agrees with the comment. This will enable the Department to determine if storage tanks storing liquids with vapor pressure close to 1.52 psi are subject to the regulation.

BASIS STATEMENT FOR AMENDMENT OF SEPTEMBER 26, 1990 : During the 114th Session of the Maine Legislature, the Board of Environmental Protection was given the authority under 38 M.R.S.A. 585 and 585-A to establish and amend emission standards and regulations to implement ambient air quality standards and emission standards. This rule was amended to reflect the new authority under statute. No request for public hearing nor comments were received on the reauthorization.

AUTHORITY: 38 M.R.S.A., Section 585, 585-A

EFFECTIVE DATE: May 07, 1979

Amended: October 03, 1989

Amended: November 3, 1990